

REMARKS

I. INTRODUCTION

Claims 1-18 and 20-27 remain pending in the present application. No new matter has been added. In light of the following remarks, Applicants respectfully submit that all presently pending claims are in condition for allowance.

II. THE DOUBLE PATENTING REJECTION IS ACKNOWLEDGED

Claims 1-18 and 20-27 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 and 20-28 of copending Application No. 10/574,141 and claims 1-22 and 24-35 of copending Application No. 10/574,140. The Applicants acknowledge this **provisional** rejection and will address the rejection if the claims of the applications are deemed allowable and remain subject of a non-provisional double patenting rejection.

III. THE 35 U.S.C. § 103(a) REJECTIONS SHOULD BE WITHDRAWN

Claims 1-14, 18, 20-23 and 27 stand rejected under 35 U.S.C. §103(a) as unpatentable over Balogh (U.S. Published App. No. 2001/0028356) in view of Andrade et al. (U.S. Patent No. 6,954,193).

Claim 1 recites, “[a] display device for displaying a three dimensional image such that different views are displayed according to different viewing angles, the display device including: a display panel having a plurality of separately addressable pixels for displaying said image, the pixels being grouped such that different pixels in a group correspond to different views of the image as a function of an angle with respect to a first axis; a display driver for controlling an optical characteristic of each pixel to generate a grey scale image according to received image data; and *a grey scale compensation device for further controlling light transmission characteristics of at least some pixels within a group* to compensate for a predetermined viewing angle dependency of said optical characteristic in a second axis of the display panel, wherein the second axis is transverse to the first axis.”

The Examiner correctly admits that Balogh fails to teach “a grey scale compensation device for further controlling light transmission characteristics of at least some pixels within a group to compensate for a predetermined viewing angle dependency of said optical characteristic in a second axis of the display panel, wherein the second axis is transverse to the first axis.” (*See*, Office Action, page 5). However, the Examiner cites Andrade to cure this deficiency of Balogh. (*See, Id.*). Applicants respectfully disagree.

Initially, it appears that Andrade is only applicable to 2D displays and never mentions 3D displays. Applicants respectfully submit that the Examiner has not made a *prima facie* case of obviousness because the Examiner has not explained how the 2D technology of Andrade would be applied to the disclosure of Balogh to disclose claim 1. Claim 1 clearly recites “[a] display device for displaying a three dimensional image.” The Applicants respectfully remind the Examiner that “[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.” (*See*, MPEP 2142). The Examiner merely states, without any additional support, that

It would have been obvious to one of ordinary skill in the art at the time of invention that the perceived grey scale varies according to the viewing angle at which the display is observed, as taught by Andrade et al (see column 2, line 62 to column 3, line 3), such that it would be necessary to compensate pixel intensities at wider viewing angles to ensure that all viewers, regardless of location, are able to view a correct image.

(*See*, Office Action, pages 4-5).

However, as stated above, this never explains how one of ordinary skill in the art would apply the 2D methods of Andrade to Balogh. Specifically, Andrade generally requires sensor input to determine the location of a viewer. For example, Andrade states that the sensors include “a display orientation sensor, a viewing position sensor, or a viewer feature tracking sensor.” (*See*, Andrade, col. 5, lines 35-37). Andrade provides

numerous examples of sensor inputs for determining the angle where a viewer is watching the display and/or the orientation of the display. (*See e.g., Id.*, at col. 8, lines 18-28; and col. 9, lines 31-35). Andrade does state that pixel level correction may be provided without sensor input, but this is based upon “average value assumptions associated with viewing positions, display orientation, and the like.” (*See, Id.*, at col. 8, lines 29-35). Thus, even though sensor inputs are not required, Andrade still requires that there be values for these parameters in order to determine the pixel correction. This is because Andrade is correcting a 2D display for a single viewer or based on a single orientation of the display. A second viewer viewing the 2D display from a different angle would not have the benefit of a corrected image.

In contrast, a 3D display such as the display of claim 1, knowledge of a viewer’s position and/or the display orientation is irrelevant. The 3D display is corrected for all viewers at all viewing angles. As recited in claim 1, “the pixels being grouped such that different pixels in a group correspond to different views of the image as a function of an angle with respect to a first axis.” Thus, different pixels of a group are directed to different views. There is no such distinction in a 2D display such as Andrade. Claim 1 then further requires “a grey scale compensation device for further controlling light transmission characteristics of at least some pixels within a group.” As described above, even if Andrade were considered to correct pixels, it does not “control[] light transmission characteristics of at least some pixels within a group” as recited in claim 1. The correction of Andrade is purely based on a single viewer or a single viewing angle. The pixels are not grouped such that a group has different pixels for different views. There is no disclosure or suggestion within Andrade of how to apply the pixel correction of Andrade to a 3D system such as Balogh. Moreover, as admitted by the Examiner, Balogh never discusses such a correction and therefore has no suggestion with respect to carrying out any type of correction.

Accordingly, the Applicants respectfully submit that neither Balogh nor Andrade, either alone or in combination, disclose or suggest. “*a grey scale compensation device for further controlling light transmission characteristics of at least some pixels within a*

group to compensate for a predetermined viewing angle dependency of said optical characteristic in a second axis of the display panel, wherein the second axis is transverse to the first axis” as recited in claim 1. Thus, Applicants respectfully request the withdrawal of the rejection of claim 1. Because claims 2-14 depend on and, therefore, contain all of the limitations of claim 1, it is respectfully submitted that the rejections of these claims should also be withdrawn.

Claim 18 recites, “applying grey scale correction values to at least some pixel data values within each group to compensate for a predetermined viewing angle dependency of an optical characteristic in a second axis of the display panel, wherein the second axis is transverse to the first axis, by controlling an amount of light passing through each pixel according to a three dimensional colour image to be displayed.” Thus it is respectfully submitted that the rejection of claim 18 and its dependent claims 20-23 and 27 should be withdrawn for at least the foregoing reasons presented with regards to claim 1.

Claims 15-17 and 24-26 stand rejected under 35 U.S.C. §103(a) as unpatentable over Balogh in view of Andrade and further in view of Mochizuki (U.S. Patent No. 6,386,720).

Applicants respectfully submit that Mochizuku fails to cure the deficiencies of Balogh and Andrade and that Balogh, Andrade, and Mochizuku, taken alone or in any combination, fail to disclose or suggest the limitations of claims 1 and 18. Because claims 15-17 depend on and, therefore, contain all of the limitations of claim 1, it is respectfully submitted that these rejections should be withdrawn. Because claims 24-26 depend on and, therefore, contain all of the limitations of claim 18, it is respectfully submitted that these rejections be withdrawn.

Applicants respectfully submit that the Examiner did not address the arguments presented with regards to the Mochizuku reference in the previous response. Therefore, Applicants respectfully request that the Examiner either withdraw the 35 U.S.C. § 103(a)

rejection in view of Mochizuku or address the arguments presented above in a new Non-Final Office Action.

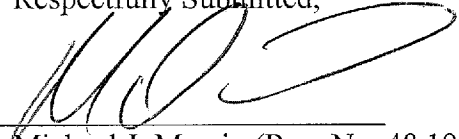
CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application are believed to be in condition for allowance. If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to contact the undersigned.

Respectfully Submitted,

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By: _____


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